## Contents of Aquaculture, Volume 119

VOL. 119 NO. 1	1 JANUARY 1994
Diseases, Parasites and Predators	
Temperature-dependent absorption and elimination of flumequine	in rainbow trout
(Oncorhynchus mykiss Walbaum) in fresh water	
S. Sohlberg, A. Aulie and N.E. Søli (Oslo, Norway)	1
Genetics and Breeding	
Production of viable gynogens without chromosome duplication in biwae	the spinous loach Cobitis
T. Kusunoki, K. Arai and R. Suzuki (Higashi-hiroshima, Japan	11
Husbandry and Management	
Use of a probiotic for the culture of larvae of the Pacific oyster (Cr	assostrea gigas Thunberg)
P.A. Douillet and C.J. Langdon (Newport, OR, USA)	
Nutrition	
Growth and survival of fry of African catfish species, Clarias garies	pinus Burchell,
Heterobranchus bidorsalis Geoffery and Heteroclarias reared on	
comparison with other first feed sources	
A.A. Adeyemo, G.A. Oladosu and A.O. Ayinla (Port Harcourt,	Nigeria) 41
Influence of composition of Brachionus plicatilis and Artemia on gr	
(Anoplopoma fimbria Pallas)	
J.N.C. Whyte, W.C. Clarke, N.G. Ginther, J.O.T. Jensen and L.	D. Townsend (Nanaimo,
B.C., Canada)	
Factors affecting the proximate composition of cultured fishes with	
K.D. Shearer (Seattle, WA, USA)	
12.2.5.3.6.3.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0	
Physiology and Endocrinology	
Optimal staining of lipids in bivalve larvae with Nile Red	
L.L. Castell and R. Mann (Gloucester Point, VA, USA)	89
Guide for Authors	101
Announcement from the Publisher	107
Announcement from the Publisher	107
VOL. 119 NOS. 2/3	15 JANUARY 1994
Diseases, Parasites and Predators	
Description and evaluation of a new surveillance programme for dr	rug use in fish farming in
Norway	137
M. Bangen, K. Grave (Oslo, Norway), R. Nordmo (Alhusstran	d, Norway) and N.E. Søli

Genetics and Breeding	
Direct comparison of six methods to induce triploidy in bivalves	
J. Scarpa (Mie, Japan), J.E. Toro (Valdivia, Chile) and K.T. Wada (Mie, Japan)	119
Genetic variation in body weight and flesh colour of the coho salmon (Oncorhynchus kisutch)	
in British Columbia	
R.E. Withler and T.D. Beacham (Nanaimo, B.C., Canada)	135
Husbandry and Management	
Hatchery production for the venerid clam Katelysia rhytiphora (Lamy) and the Sydney	
cockle Anadara trapezia (Deshayes)	
J.A. Nell, W.A. O'Connor, M.P. Heasman and L.J. Goard (Salamander Bay, N.S.W.,	
Australia)	149
Effects of egg disinfection on yolk sac and first feeding stages of halibut (Hippoglossus	
hippoglossus L.) larvae	
T. Harboe, I. Huse (Storebø, Norway) and G. Øie (Trondheim, Norway)	157
The paradox of using background phytoplankton during the larval culture of striped mullet,	
Mugil cephalus L.	
C.S. Tamaru (Waimanalo, HI, USA), R. Murashige (Kailua-Kona, HI, USA) and C	1.65
S. Lee (Waimanalo, HI, USA)	167
Available algal biomass in tropical brackish water artificial habitats	175
A.A. Konan-Brou and D. Guiral (Abidjan, Ivory Coast)	1/5
Experimental methodology in aquaculture: modification of the feeding rate of the gilthead sea	
bream Sparus aurata at a self-feeder after weighing	
M. Kentouri (Heraklion, Crete, Greece), L. León, L. Tort (Barcelona, Spain) and	101
P. Divanach (Heraklion, Crete, Greece)	191
Raceway density and water flow as factors affecting spring chinook salmon (Oncorhynchus	
tshawytscha) during rearing and after release  J.L. Banks (Longview, WA, USA)	201
An index of biotic integrity to assess biological impacts of salmonid farm effluents on	201
receiving waters	
T. Oberdorff (Yvelines, France) and J.P. Porcher (Cesson-Sévigné, France)	210
1. Oberdon (Tvennes, Plance) and J.F. Forcher (Cesson-Sevigne, Flance)	219
Nutrition Silver and S	
The influence of three algal filtrates on the grazing rate of larval oysters (Crassostrea gigas),	
determined by fluorescent microspheres	
P.A. Thompson, D.J.S. Montagnes, B.A. Shaw and P.J. Harrison (Vancouver, B.C.,	227
Canada)  Relationships between the weight and chemical composition of exuvia and whole body of the	231
black tiger prawn, Penaeus monodon	
H.Z. Sarac (Bribie Island, Qld., Australia), N.P. McMeniman (Brisbane, Qld.,	
Australia), H. Thaggard, M. Gravel, S. Tabrett and J. Saunders (Bribie Island, Qld.,	
Australia)	249
Dietary zinc requirement of fingerling Oreochromis niloticus	27)
A.E. Eid and S.I. Ghonim (Ismailia, Egypt)	259
Optimal dietary protein level for the growth of juvenile grouper, Epinephelus malabaricus, fed	
semipurified diets	
HY. Chen and JC. Tsai (Kaohsiung, Taiwan, ROC)	265
Biochemical composition and fatty acid content of fertilized eggs, yolk sac stage larvae and	
first-feeding larvae of the Senegal sole (Solea senegalensis Kaup)	
R. Vázquez (El Puerto de Santa María Cádiz, Spain), S. González, A. Rodríguez and	
G. Mourente (Puerto Real Cádiz, Spain)	273
Dietary lipid sources influence responses of channel catfish (Ictalurus punctatus) to challenge	
with the pathogen Edwardsiella ictaluri	
D.M. Fracalossi and R.T. Lovell (Auburn, AL, USA)	287

Comparison of processing yield and nutrient composition of cultured Nile til (Oreochromis niloticus) and channel catfish (Ictalurus punctatus)	apia
S. Clement and R.T. Lovell (Auburn, AL, USA)	299
Announcement from the Publisher	
VOL. 119 NO. 4	FEBRUARY 1994
Genetics and Breeding	
Electroporation of salmon sperm with plasmid DNA: evidence of enhanced s association	perm/DNA
J.E. Symonds, S.P. Walker and F.Y.T. Sin (Christchurch, New Zealand).	313
Husbandry and Management	
Socio-economic and cultural factors in aquaculture development: a case study D.H.L. Thomas (Gland, Switzerland)	
Relations among environmental conditions and growth in the tropical scallog	
(Pecten) ziczac (L.) in suspended culture in the Golfo de Cariaco, Venez C.J. Lodeiros and J.H. Himmelman (Laval, Québec, Canadac)	
Nutrition	
Influence of dietary lipid sources on fecundity, egg hatchability and fatty acid Chinese prawn ( <i>Penaeus chinensis</i> ) broodstock	composition of
X.L. Xu, W.J. Ji (Qingdao, China), J.D. Castell and R.K. O'Dor (Halifa:	x, N.S., Canada) 359
Physiology and Endocrinology	
Abnormal swimbladder development and lordosis in sea bass (Dicentrarchus bream (Sparus auratus)	labrax) and sea
B. Chatain (Palavas les Flots, France)	
Physiological effects of simulated high-density transport of Atlantic cod (Gade M. Staurnes, T. Sigholt, H.P. Pedersen and T. Rustad (Trondheim, Norw	
Spawning induction in common carp ( <i>Cyprinus carpio</i> ) using pituitary extractive analogue combined with metoclopramide: analysis of hormon progress of oocyte maturation and dependence on temperature	ct or GnRH
S. Drori, M. Ofir, B. Levavi-Sivan and Z. Yaron (Tel-Aviv, Israel)	393
Induction of sterility in coho salmon (Oncorhynchus kisutch) by androgen im first feeding	
F. Piferrer (West Vancouver, BC, Canada), M. Carrillo, S. Zanuy (Ribera Castellón, Spain), I.I. Solar and E.M. Donaldson (West Vancouver, BC, Canada)	
Short Communication	
The vitamin- $B_{12}$ -producing bacteria in the water and sediment of a carp cultu	re pond
H. Sugita, A. Kuruma, C. Hirato (Tokyo, Japan), T. Ohkoshi, R. Okada (Japan) and Y. Deguchi (Tokyo, Japan)	Saitama,
Author Index	433